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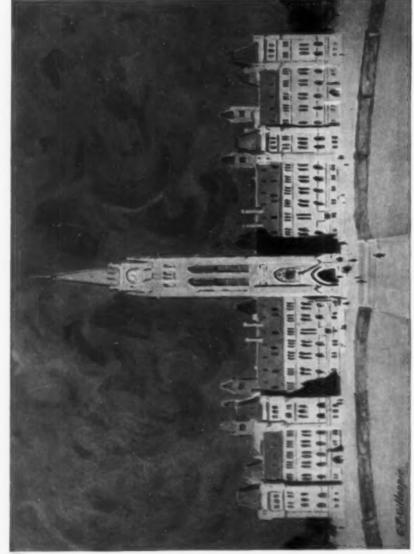
This magazine is dedicated to the interpretation, in authentic and popular form, with extensive illustration, of geography in its widest sense, first of Canada, then of the rest of the British Commonwealth, and other parts of the world in which Canada has special interest.

The British standard of spelling is adopted, substantially as used by the Dominion Government and taught in most Canadian schools, the precise authority being the Oxford Dictionary as edited in 1929.

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From a painting by Gordon Gillespie.

The Parliament Buildings, Ottawa.

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Canadian Geographical Journal

Ottawa-More Than a City

By M. GRATTAN O'LEARY

ORE than 60 years ago, when Queen Victoria ended the conflicting ambitions of Quebec, Montreal, Toronto and Kingston by selecting Ottawa as the Dominion's

capital city, the valley which enfolds the Ottawa River was famed only as a source of Canadian timber. Ottawa. then Bytown, was a lumbering, a frontier, town, its streets frequented by swarthy lumber-jacks in heavy knee boots, multicoloured shirts and caps. To-day, three generations later, it is the capital of a young and ambitious nation, typifying in many respects the qualities that belong to Canada. Both the country and its capital have pretty well outlived the rawness of extreme youth, while they have retained much of its freshness and optimism.

Ottawa, in its spirit and its atmosphere, is not to be considered merely as a Canadian city, but as the heart Putting aside all supof Canada. erficial impressions, one feels here in the capital the stirrings of the growth of a nation, with the traditions behind it of two great races, with the almost illimitable resources of half a continent to turn to the best account, and with the opportunity to carve for itself a place in the world that will stand for all that is best in the past plus the contribution of its own brains and its own soul. Ottawa, like Canada, stands upon the threshold of a great destiny.

All sorts of people come to the capital for all sorts of reasons. Agents of foreign governments come to transact business, politicians to consult ministers and party leaders, lawyers to see government offi-

cials on behalf of wealthy clients; professors and students come to explore the archives and the parliamentary library; the season's debutantes come under the aegis of minister's wives, and thousands of others come, too, led only by the lure and the mystery that surround the business of government.

Physically, apart altogether from this charm and atmosphere, Ottawa possesses the first attribute of a great capital—a magnificent natural setting. The towered city rises along the crest of the steep banks of the Ottawa—a mighty and

majestic river winding down through the Laurentians, running to the St. Lawrence. From the south, the Rideau, after wandering aimlessly and placidly through eastern Ontario, joins its sister river. To west and north the horizon is flanked with hills, the famed purple Laurentians; south and east are prosperous farming communities. Up on Parliament Hill, overlooking the river, the Peace tower of the Parliament Buildings rises into the heavens like a giant national sentinel; over across the Rideau Canal is the stately, white stone-turreted Chateau Laurier; the city streets are lined with great hard



M. GRATTAN O'LEARY is Associate Editor of the "Ottawa Journal" and a contributor to Canadian and American magazines.

maples, graceful feathered elms, other trees of glory. The whole making an incomparable setting for a national

capital.

The site of the city is picturesque. For three miles it follows the high southern bank of the Ottawa from the Chaudiere Falls, whose mist-crowned

cauldron is clearly visible from the summit of Parliament Hill, to and beyond the Rideau Falls, so named by early French explorers because of their curtain-like appearance. The Rideau, a southern tributary of the Ottawa, once formed the eastern boundary of the city, which, however, is now absorbing a string of suburbs that lie along its eastern banks. The Rideau Canal cuts the city in two, the western portion being known as Upper Town and the eastern as Lower Town. Roughly speaking the canal divides the two sections of the population, the Englishspeaking occupying Upper Town and the French-speaking Lower Town. The population in 1921 was 107,843; a later estimate gives it as 126,000.

Opposite and a little below the mouth of the Rideau River, the Gatineau flows into the Ottawa from the north. The river is now the scene of large hydro-electric developments. Above the Chaudiere Falls the river is broken by the Deschenes Rapids, and beyond these again it expands into Lake Deschenes, a favourite summer resort for the people of

the city. To the north the Laurentian Hills, broken by the picturesque Gatineau Valley, offer ideal conditions for

ski-ing in winter.

The earliest description of the site of Ottawa is that of Samuel Champlain, in his "Voyages." In June, 1613, on his way up the river, he came to a tributary on the south side, "at the mouth of which is a marvellous fall. For it

descends a height of 20 or 25 fathoms with such impetuosity that it makes an arch nearly 400 paces broad. The savages take pleasure in passing under it, not wetting themselves, except from the spray that is thrown off." This was the Rideau Falls, but a good deal of allowance must be made for exaggeration in

* (1)

The Mace.

Champlain's account. For 200 years and more after Champlain's first visit the Chaudiere portage, further up the river, was the main thoroughfare from Montreal to the great western fur country; but it was not until 1800 that any permanent settlement was made in the vicinity. In that year Philemon Wright, of Woburn, Massachusetts. built a home for himself at the foot of the portage, on the Quebec side of the river. where the city of Hull now stands; but for some time the precipitous cliffs on the south side seem to have discouraged settlement there. Finally about 1820 one Nicholas Sparks moved over the river and cleared a farm in what is now the heart of Ottawa. Seven years later Colonel John By, Royal Engineers, was sent out to build a canal from a point below the Chaudiere Falls to Kingston on Lake Ontario. The canal, completed at a cost of \$2,500,000, has never been of any great com-mercial importance; it has never been called upon to fulfill its primary object, as a military work to enable gun-boats and military sup-

plies to reach the lakes from Montreal without being exposed to attack along the St. Lawrence frontier. The building of the canal created a fair-sized settlement at its Ottawa end, which came to be known as Bytown. As the lumber trade developed Bytown rapidly increased in wealth and importance. In 1854 it was incorporated as a city, the name being changed to Ottawa; and four years later Queen Victoria selected



Canadian Government photograph.

Chateau Laurier Hotel, Ottawa.

Ottawa as the capital of Canada. Ottawa was admirably situated for a capital from a political and military point of view; but there is reason to

believe that the deciding factor was the pressure exerted by the four other rival claimants, Montreal, Quebec, Toronto and Kingston, any three of which would have fiercely resented the selection of the fourth. The first session of parlimaent in the new capital was opened in 1865.

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It was Wilfrid Laurier, he who caught the vision of a greater Canada in the 20th century, who first realized what Ottawa should mean to the Canadian people. Some years before James D. Edgar had writ-

ten: "Just as the patriotism of the Athenian was kindled at the sight of the Acropolis, and that every Scottish heart beats high when he sees the an-

cient castle on Edin's Hill, so every true Canadian is filled with pride in his country when he views the noble pile of federal buildings far above the foaming Ottawa, as they tower and glitter in the setting sun, and his feelings and actions are influenced for the better when he returns to his distant home, whether on the shore of the Atlantic, on the western prairie, or on the far off Pacific slope."

Laurier had this conception of Ottawa as the capital. He believed, and he

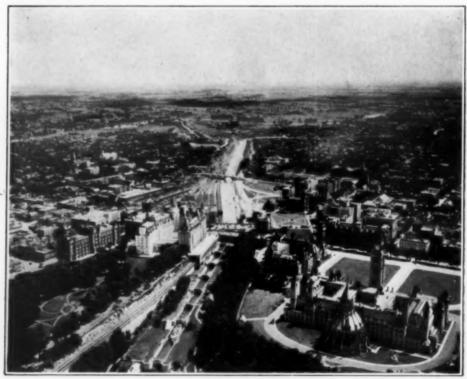


Lieut.-Col. John By, R.E., founder of Bytown, which, in 1854, was changed to Ottawa.

preached, that Ottawa should be the centre of Canadian hopes and ideals and longings, that it should reflect something of the history, the culture, the soul and the traditions of the Canadian people; that to it Canadians should make pilgrimage as to a place which promoted their spirit of nationality, and kindled their flame of patriotism. And Laurier sought to give purpose and practical

property. Parliament, under this arrangement, was to vote \$60,000 a year for 10 years, this money to build driveways, to create parks.

So began that programme which, in 30 years, has made of Ottawa one of the loveliest and stateliest and most beautiful cities of this continent. Ottawa may not be as ornate as Washington, its federal buildings may lack the elaborate



Royal Air Force photograph.

Looking southward over a part of Ottawa from the air. In the foreground are shown the locks of the Rideau Canal, where it links with the Ottawa River. To the left is Major's Hill Park, where Colonel John By, of the Royal Engineers, who was in charge of the construction of the canal, pitched his first camp in 1826. The Houses of Parliament are shown on the right. The conical-shaped building in the foreground is the Parliamentary Library, the only part of the main building to survive the fire of 1916.

realization to his dream by what became known as the Ottawa Improvement Commission.

This Commission, created in 1899, and composed of 10 members, representative of the Federal government and the city, was given authority, permanently, over government improvements, became a corporate body empowered to own

richness of the Capitol Buildings, yet its natural beauty, its majestic setting, and the dignity of its Gothic architecture, give it a charm and a distinction in harmony with the genius and the traditions of the Canadian people.

There is much more to Ottawa as the capital than its Parliament Buildings. There is the old, sleepy Rideau Canal,

preserved in partial usefulness through the years, there are museums and archives and a national gallery; there are churches and public buildings of stateliness and beauty; and there are miles of beautiful driveways and spacious parks. No other city in Canada is quite so richly endowed.

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Since the days of Laurier, the Ottawa

could not grasp the central meaning, from a national standpoint, of Mr. King's ideas. Some there were in Parliament who looked upon improvements for Ottawa as they might look upon patronage or public works for any municipality throughout the land, and this attitude, largely the result of misunderstanding, delayed, and in some



Royal Air Force photograph.

A section of Parliament Hill from the air. Across the river is the city of Hull, Quebec, and beyond, the Laurentian Mountains, a great natural playground of hunting, fishing and motoring in the spring, summer and autumn and in the winter a favourite resort for thousands of skiers. To the left are large lumber, pulp and paper plants. About the centre of the foreground is the Chateau Laurier.

Improvement Commission scheme has grown. Mr. Mackenzie King had much of the vision of his great predecessor, and during his Premiership conceived and partially-executed ambitious plans for a national capital on a grander scale. Unfortunately, and detracting from our reputation for large-mindedness in such matters, there were those in Canada who

cases made impossible, the realization of schemes necessary in the development of the Capital.

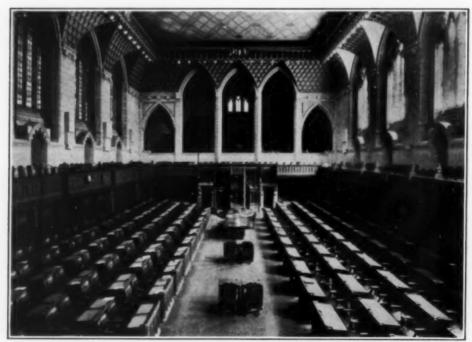
The pity of this, and the loss, is that delay makes for greater cost, that an improvement retarded now involves an almost-certain heavier burden upon the Canadian people in years to come. That

(Continued on page 186)

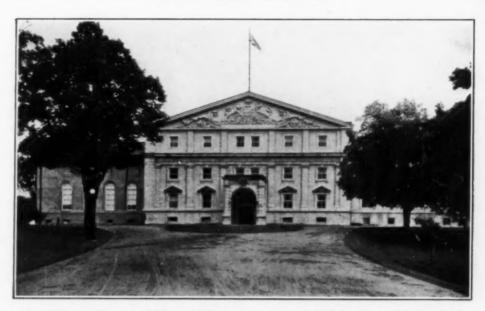


National Development Bureau photograph.

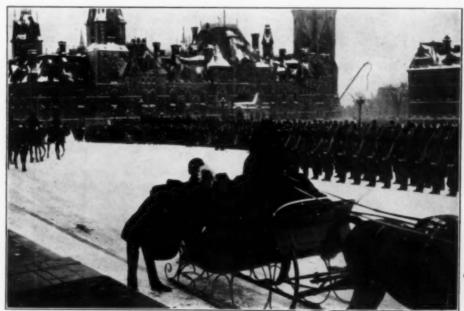
The Senate is the upper house of the Canadian Houses of Parliament. There are 96 Senators, who are appointed for life. Each must be 35 years of age or over and receives \$4,000 a year. The principal ceremony of opening Parliament is conducted in this chamber by His Excellency the Governor-General of Canada.



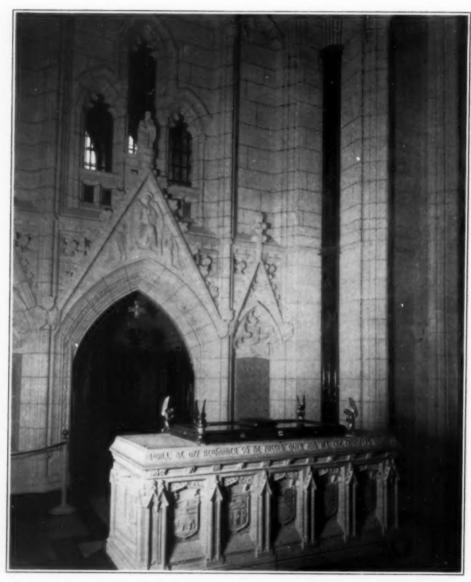
Interior of the House of Commons. The Speaker's Chair is a gift from the British Empire Parliamentary Association. There are 245 members of the House of Commons. The Government supporters occupy the seats to the right of the Speaker.



Government House, or Rideau Hall, as it is often called, is the residence of the Governor-General of Canada, and stands in a spacious area of park land. The first house on the site was known as "Mackay's Castle." Mackay was one of the contractors on the Rideau Canal and while engaged in that work, between 1826 and 1832, built himself a house, then regarded as a pretentious one. The property was later acquired by the Government and additions and improvements were made from time to time.



Arrival of His Excellency the Governor-General for the opening of Parliament.



Canadian Government photograph.

Memorial chamber in the Peace Tower, Houses of Parliament, Ottawa. This is the shrine in honour of the 60,000 men and women who lost their lives during the Great War, while serving with the Canadian Expeditionary Forces. Here is shown the altar on which is to be placed the Book of Remembrance containing the names of the honoured dead.



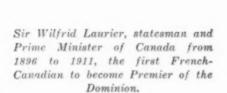
Canadian Government photograph.

The Parliamentary Library, Ottawa. Built in 1859 this building, having many valuable books and documents, alone survived the fire of 1916.



Canadian Government photograph.

This monument of Sir John A. Macdonald, father of Confederation and first Premier of Canada, stands in the grounds of the Houses of Parliament, Ottawa.





Canadian Government photograph.

Thomas D'Arcy McGee, whose work as a stateman and orator in the cause of Confederation, has won for him a place of prominence in the annals of Canadian history.

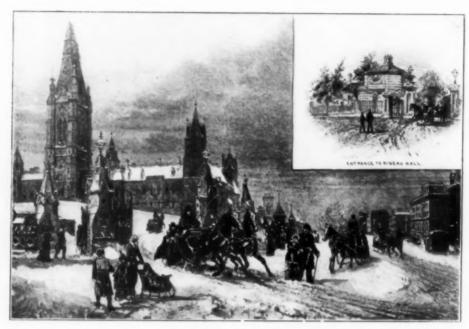


Canadian Government photograph.



Canadian Government photograph.

In 1858 when many towns vied with each other to be the capital of Canada, Queen Victoria favoured none, but, instead, chose Bytown.



Reproduced by permission of the National Gallery of Canada.

A view of Wellington Street, Ottawa, and the Houses of Parliament in the Nineties.



Reproduced by permission of the National Gallery of Canada. Falls of the Chaudiere River.

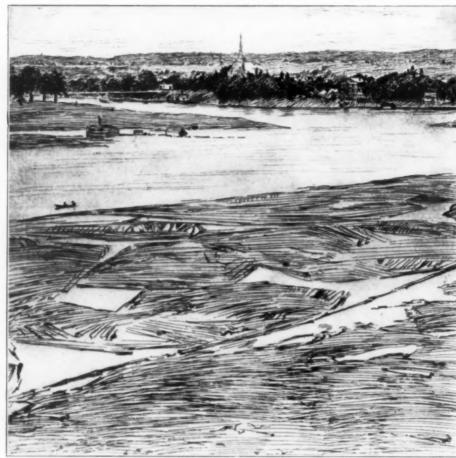


National Development Bureau photograph.

Almost every residential street in Ottawa is tree-embowered. This view shows a typical residential street in the city. The maple is the most popular shade tree, as it is throughout Eastern Canada.



National Development Bureau photograph. Sparks and Elgin streets in the year 1865.



From an etching by Ernest Fosbery, R.C.A.

Ottawa River and Gatineau Point from entrance to Government House.

(Continued from page 177)

has been the experience of Washington, of Paris, of London; it cannot but be the experience of Ottawa.

When Washington was chosen the capital of the United States, Jefferson and George Washington called in experts to advise on its beautification. A distinguished French engineer, L'Enfant, was commissioned to formulate a programme. His report, unfortunately, was scorned as ridiculous because of its cost. Washington, himself, would have liked to adopt it, but his associates, the apostles of economy in those days, sneered at what they called the grandiloquent ideas of the Louis kings being foisted upon the American democracy. The L'Enfant report was consequently pigeonholed—

ignored for 100 years. At the end of that time, after a century of expansion, another Commission, intent upon beautifying Washington, found that L'Enfant's plans could not be improved upon, that their adoption had become necessary. The only compulsory change, and it was a tremendous one, was that a century of delay had added enormously to the project's cost. What a few millions would have achieved in 1778, only hundreds of millions could accomplish in the present century.

It was so with the story of Paris. Napoleon found time, apart from military campaigns, conquests, and his love for Josephine, to formulate a plan for the beautification of the French capital. His project lapsed with his fall from



The Speaker's Chair in the House of Commons, Ottawa.

power, was scorned by his successors, but in recent years it has been revived at a cost of some \$250,000,000 to the hard-pressed French Treasury. A century ago it could have been carried out at one-twentieth of this cost.

The Corporation of London is only now completing improvements vigorously recommended 250 years ago by Sir Christopher Wren, the builder of St. Paul's. After the great London fire, Wren went to the Corporation, urged that downtown streets be widened, that the city be beautified. But the statesmen of those days were more concerned with diplomacy and continental wars than with the building of a great capital, and Wren's advice was rejected. Yet to-day London is completing this work at a cost of \$125,000,000.

Thus far, over a period of nearly 30 years, not more than \$6,000,000 has been spent on Ottawa, the merest fraction of what has been lavished upon Washington, or upon the great capitals of Europe. And regarding this expenditure, comparatively small as it is, there is much of misunderstanding in the minds of Canadians. Reading the debates in the House of Commons, one detects the feeling by many of the representatives of the people that this expenditure is in the nature of patronage for the Ottawa municipality, that the citizens of Ottawa are the easy beneficiaries of an extravagant government. They are unaware that in too many cases national expenditures in the capital involve little but higher taxation for those who happen to live within the



Looking down Sparks Street, the principal thoroughfare of the Canadian Capital. Five generations ago this was farm land owned by Nicholas Sparks, a pioneer settler, after whom the street is named.



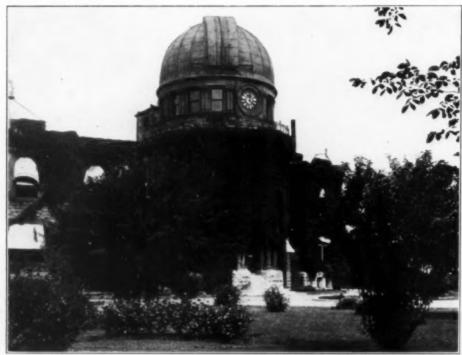
Rideau Street, one of the shopping and business streets. It is here seen from Communght Place, which is more popularly known as the Plaza. The Union Station building is shown on the right, and a corner of the Chateau Laurier on the left.



A corner of Bytown.



One of the improvements made by the Federal District Commission was the building of the Champlain Bridge over the Ottawa River shown in this photograph. It was built at a cost of \$1,000,000 and links the provinces of Ontario and Quebec. This view shows the approach from the Aylmer Road on the Quebec side.



Canadian Government photograph.

The Dominion Observatory, Ottawa.

limits of the Ottawa corporation. vators in Vancouver and Prince Rupert, harbour works in Quebec, Montreal and Halifax, these are at the expense of the Federal Treasury, impose no extra cost upon the people of these cities. It is not so with Ottawa. In nearly every case of government beautification, when parks, driveways or bridges are constructed, the plan calls for extensive and costly civic alterations, the widening of streets, the demolition of buildings, the purchase of new property,—all this involving expenditure and taxation for the residents of the capital. Thus, within the last two years alone, co-operation of the Ottawa Corporation in government schemes for the capital's beautification, has obligated Ottawa citizens to an outlay estimated at \$3,000,000.

There is no reason, no justification for this. If it be true, and it is true, that the upbuilding of a national capital is a task for the nation, then no reason exists for the major share of the burden of cost falling upon those Canadian citizens whom accidental circumstance has placed

within the boundary of the Ottawa municipality. It would be a gain to have it recognized that plans for the beautification of the capital are something more, something far higher, than gratification of patronage-seeking by the people of Ottawa, that they are instead a challenge to the national pride and patriotism of Canadians as a whole. something for which the nation should be willing and eager to pay. Premier Bennett, with a clear conception of practical realities, has realized this; and in a statement made on the public platform, he has laid down the principle that improvements to the capital are national works, the obligation of the nation.

Precisely what Mr. Bennett may have in mind to carry on the dream of Sir Wilfrid Laurier, and the more practical and ambitious schemes of Mackenzie King, remains to be disclosed. But what is certain, and what will become more sure as the years go on, is that more and more Ottawa will become recognized as a centre and expression of Canadian culture and of Canadian



The building in which Canada's Houses of Parliament meet. It replaced the one destroyed by fire on February 3rd, 1916, and is one of the few examples of Gothic architecture in North America. In the general design and disposition of the exterior there is comparatively little difference in this building from the former one. It has a frontage of 472 feet, with a depth of 247 feet. The outstanding feature is the central Peace Tower, 221 feet high, in which there is a carillon of 53 bells.

national sentiment, will become for the average Canadian what Paris is for the Frenchman, Dublin for the Gael, Edinburgh for the Scot. More and more, one thinks. Canadians will make pilgrimages to their national capital, will visit it to learn more of the meaning of their country, to become more imbued with its past, its present, and its aspirations for the future. In this respect, Canada might well take a leaf from the book of the great Republic. Every year for years past, 90 per cent of all those who visit Washington have been American citizens. American railways run special excursion rates so that educators and teachers and students, the rich and poor of the Republic alike, may have an opportunity of visiting the capital

of their country, of witnessing the functioning of the machinery of government, of knowing more of the background and story of their founders. It is not so with Ottawa. It is true, and a pity, that for every Canadian who comes to Ottawa and gets to know more of its meaning, nine go to the greater cities of the United States.

Much more profitably and pleasurably could they visit their own capital. For Ottawa, apart from what it means, or ought to mean, as the national capital, is an historic city, a city of brave memories, of a great beauty. Perhaps no other capital, certainly no other capital on this continent, possesses such a noble, commanding site, such picturesque sur-

(Continued on page 198)



Canadian Government photograph.

A skating party in the grounds of Government House.



Canadian Government photograph.

All ready for a cross-country hike. This is Camp Fortune, one of the rendezvous of the Ottawa Ski Club in the Laurentian or Gatineau Hills, about 10 miles from Ottawa. This club alone has a membership of about 3,000. and the Cliffside and Glenlea Clubs are also very active. Every week-end when the snow is deep enough the Gatineau district is dotted with skiers.



Laurier House. This was the home of the great Liberal chieftain, Sir Wilfrid Laurier, during the latter part of his lifetime. The property was bought and presented to him by members of the Liberal Party. Lady Laurier bequeathed it, at her death, to the leader of the Liberal Party. It is on Laurier Avenue, East.



Scenes like this are common in the city and environs during winter months. Ski-ing, skating and tobogganing are the most popular sports. Winter may be a dull time in some places, but it certainly is not in the Canadian Capital.



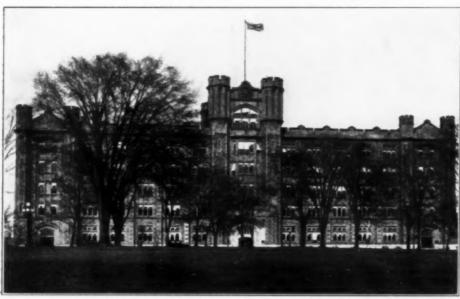
National Development Bureau photograph.

The Parliamentary Library through the delicate foliage of the trees in Major's Hill Park, which adjoins the Chuteau Laurier.



National Development Bureau photograph.

Beauty spots such as this are found in the most unexpected places in Ottawa.
This view shows part of a sunken park that extends for several acres on the east and west sides of Bank Street and forms a part of the Federal District Commission Driveways. A few years ago, this spot was a neglected piece of waste land.



Canadian Government photograph.

Connaught Building, Ottawa, in which is housed the Department of National Revenue.



National Development Bureau photograph.

A lagoon in the driveway system. Here and there along the driveways in Ottawa there are picturesque lagoons, where in the sweet shades of summer evenings romantic couples go to commune in the age-old way, and others, less romantic, wander to find surcease from the heat and burden of the day.



One of the many beautiful falls not far from Ottawa,



A view of the western section of Ottawa 80 years ago.



National Development Bureau photograph.

There are miles of driveways such as this, on which no heavy traffic is allowed.

The green boulevards and open spaces provide ideal places for the children to romp or rest.

(Continued from page 191)
roundings, such bountiful gifts from
nature. The noble Ottawa river, flowing
along its northern boundary, the Rideau
River encircling the greater part of it
and joining the Ottawa, and the tur-

bulent Gatineau coming in from the north, these form a picture of scenic grandeur difficult to surpass. Always, too above the city's noise, one is conscious of the roar of the Chaudiere Falls, while in the distance may be seen the purple



These guns are relics of other wars and adorn Nepean Point, where Champlain, the French explorer, landed in 1613, and from its vantage point took bearings of the country westward.



National Development Bureau photograph. A view of a part of Ottawa with Parliament Buildings under construction.

haze of the Laurentian mountains. Rivers, waterfalls, bordering forests and ridges of glorious rock, form an essential part of the picture, and more than one celebrated world traveller has told that the view from Parliament Hill is one of the most magnificent on the North American continent.

In 1861 Anthony Trollope wrote: "Ottawa is the Edinburgh of British North America. It stands nobly on a magnificent river with high, overhanging rock, and a natural grandeur of position which has perhaps gone far to recommend it to those who chose it as the capital of Canada.

Charles Dudley Warner said: "The group of government buildings is surprisingly fine. The Parliament House and Departmental Buildings on three sides of a square, are exceedingly effective in colour and the perfection of Gothic details; especially in the noble towers. There are few groups of buildings anywhere so pleasing to the eye, or that appeal more strongly to one's sense of dignity and beauty.

J. Macdonald Oxley, writing more recently, says: "The Canadian Houses of Parliament with their attendant departmental buildings, uprising from amidst a wealth of flower, leaf and lawn, present a picture rich in harmony and grace, and artistically perfect. To view them aright you must stand on nature's hill some glorious summer evening when the swiftly-sinking sun invests them with a halo of mingled gold and fire.'

Between 1917 and 1922 a magnificent \$12,000,000 building was erected on the site of the old structure, destroyed by fire, and it is one of the most imposing buildings of its kind to be found anywhere. In front of this main building is the Peace Tower, rising almost sheer into the heavens, within it the Memorial Chamber commemorating the sacrifices of Canadians in the Great War; within it too, a wonderful carillon of 53 bells, with a range of four and a half octaves and with the largest bell weighing ten tons. The great Gothic tower itself resembles Giotto's bell tower at Florence which for six centuries has compelled the admiration of all travellers; and competent critics claim that with the exception of the Victoria Tower, Westminster, Ottawa's Peace Tower is more imposing than any of the Classic or Renaissance towers of Europe or Asia.

In Ottawa, too, are other scenes and spots, rich in tradition, hallowed with the memory of the best things in our history; the monuments of the men who made possible Confederation, the tombs of Laurier and many another, the old home of Sir John Macdonald; countless places and things that call up brave memories and are a challenge to patriotism and reverence. Ottawa, in truth, is more than a city; it is the heart, the political pulse, the nerve centre of the nation, as much a part of our national being as our laws, our institutions and

the very core of our nationality.



The map roughly shows the racial divisions of Europe.

European Sources of Non-Anglo-Saxons in Canada

By REV. DENZIL G. RIDOUT

NO study of Canadian life will be complete without a careful consideration of the sources of its

civilization. In a new country, where a comparatively small population is in possession of tremendous geographical area, the incoming millions of settlers in the past half-century have had, and will continue to have, a great influence upon its citizenship. A visitor to any of the large cities, to the three Prairie Provinces. or to certain well-known areas in the Maritimes and in Ontario, will realize that no small measure of influence is being exerted by those who have migrated to Canada from one or other of the European lands. It is not difficult, when journeying through certain parts of western Canada, to imagine oneself on a tour through Europe. In the speech of the people, the architecture of the homes, the worship in the churches, the dress and many of the customs, the life of the older lands across the sea is reproduced. There are many who do not desire that Canada shall have a civilization purely Anglo-Saxon, but believe that with the best contributions from many peoples, the Canadian of tomorrow will be a better

type than any previously developed. Canada is being populated by peoples who represent, not only the Anglo-Saxon and the French races, but between 60 and 70 different nationalities, speaking more than a hundred different languages. Approximately half of the children of school age, between the Great Lakes and the Rocky Mountains, come from non-Anglo-Saxon homes. The families of the non-Anglo-Saxons are usually double the size of those of the Anglo-Saxons.



REV. D. G. RIDOUT

who is Assistant Secretary of the Missionary and Maintenance Fund of the United Church of Canada, was born in Dorsetshire, England, son of a well-known English journalist. He came to Canada on a holiday visit in 1908, and decided to remain here. He is a graduate in theology of Victoria University, Toronto. As one of the Secretaries of the United Church, Mr. Ridout has made a study of the lire of the non-Anglo-Sexon people in Canada, and in 1929 made a journey through 15 countries of Europe, to secure first-hand information and photographs of the homeland of our non-Anglo-Saxon citizens. This article is a result of his European travels. All of the photographs were taken by Mr. Ridout.

A large percentage of the immigrants of the past 30 years have come from European countries. The chart in this

article indicates the percentage of those arriving each year. The chart shows how both before and after the War a large percentage came from European lands. In the last few years every second immigrant has been of European extraction-not that the Canadian Governments have desired this, but because of conditions in the homelands across the seas. An analysis of the immigration from the United States reveals that about 30 per cent, are non-Anglo-Saxons.

Anglo-Saxons.

Another interesting fact is disclosed in the immigration figures of a recent year. Of the British immigrants, nearly 30 per cent have been children under 18 years of age, but of the non-British, just over 15 per cent of the immigrants have been under 18 vears of age. This means that the non-British will be sharing in Canadian life more speedily. Taking three recent years as an example, it is seen that in the period between 1925 and 1928 there came to Canada as immigrants over 3,000 more Germans and Slovaks than Scotch:

500 more Ruthenians than Irish; nearly 1,000 more from Jugo Slavia than from Wales; and if the Germans, Magyars, Poles and Ruthenians be added, they total 16,000 more than from England.

It will be seen that the main streams of migration from Europe to Canada have been from either the Teutonic, the Slavic, or the Mongolian races. From Italy, Roumania, France and Belgium have come only a limited number of the Latin race. The great majority have



From all the houses of this Hungarian village the villagers come to the well for water.

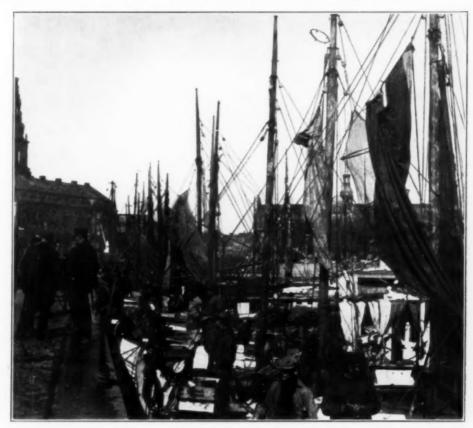
come from the northern or central European lands.

The following total of the immigration figures for the four years 1925-1929 are enlightening:—

Number of immigrants entering Canada 1925-1929

British			×	×			i				*	196,566
Teutonic				į		ø		į				84,505
Slavic												
Mongolian												
Hebrew												
Other Europea	ar	1.			ì							27,206
United States.												

The Teutonic peoples are known to us as the Germans, Dutch (Hollanders), and Scandinavians (Danish, Swedish and Norwegian). In type they are similar to the Anglo-Saxons. In fact, the Angles and the Saxons came over to the little island of Britain centuries ago from Denmark and Germany, and, with their weapons of war, were none too polite in the manner in which they took possession. True enough, they were then heathen and worshipped Woden, the god of war, of whom we are reminded every Wednesday. The Teutonic people live in northern Europe and their homes and standards of life are like those of the British. Each country has its individual language, historical background, and political problems, and there are the minor differences still to be observed.



Scene at the fish market at Copenhagen. To the left may be seen the Parliament Buildings of Denmark.

such as the wearing of the wooden shoes in rural Holland, and the building, in many parts, of the cattle barn and the home under one roof, but in their standards of education, and in the organized life, there is more of similarity than of difference. When these people come to Canada they soon merge with Anglo-Saxon peoples and they speedily learn the English language and Canadian customs.

The Slavs are a wonderfully interesting people. A racial map of Europe reveals how, in the ages past, they pushed their way right into the heart of Europe. They are known to-day as the Czechs and Slovaks; the Poles and Ruthenians; the Russians and Ukrainians; the Croats, Slovenes and Serbs (Jugo-Slavia); the Bulgarians, and so on. Many of these peoples are now residents of Canada. Next to the British and French, the

Ukrainian or Ruthenian group is the largest in the Dominion, numbering in the neighbourhood of half a million.

A traveller from Berlin to Warsaw will soon recognize a difference between the Teutonic and the Slavic races. There is lacking a certain restless, ambitious vivacity in the Slav-but in its place is observed a diligent, ceaseless, plodding In Teutonic lands the persistence. tendency has been towards the increasing use of modern machinery, but in the Slavic countries, the hand looms are still seen in the homes for spinning the varn made from the hand-combed flax; the men and women in their bare feet are seen working with their hoes on the four or five-acre farms; the small cottages are of the primitive kind, with one or two rooms, mud walls and dirt floors; the women still go to the village streams to wash the clothes and the pots and



The windmills and canals of Holland, to be seen everywhere, are usually quite artistic.

pans. Electricity on the farm, which is so much used in Sweden, is unheard of; washing machines and cream separators, as in Germany, one rarely sees; fine buildings and waterworks, as in Denmark, are a rarity. It seems as though the Slavs, for some reason or another, have lagged a century behind and only in recent years are they trying to overtake the march of civilization. The Moravians and Bohemians of Czechoslovakia (formerly in Austria) seem more aggressive—but they are known as the "Germans of the Slavs."

The Slavs have, potentially, powers equal to the other races, but their form of government in the past has kept from the great majority of them the liberties and privileges enjoyed by the peoples of other lands. The difficulties the Slavic countries are now facing in these transitional periods are due in no small measure to the fact that in so many ways the development of a century is being crowded into a decade or two.

The European peoples of Mongolian descent are not as numerous as the others. Their civilization has largely

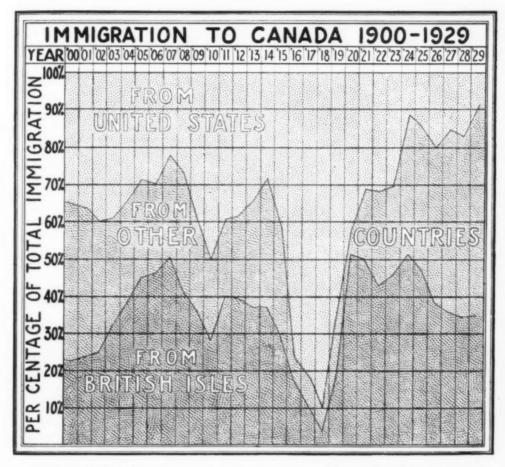


Chart indicating the percentage of immigration from Great Britain, the United States and other countries to Canada for each year, 1900 to 1929.

been influenced by either the Teutonic or Slavic. The northern group, known as the Finns, has been influenced by the Russian Slavs and the Swedish Teutons. The central group, known as the Magyars or Hungarians, has been influenced by the German and Austrian Teutonic life, and in a measure also by the Czechs, Ruthenians, and Slovaks of the Slavic race. Though for centuries the Mongolian types have been under these dual influences, they still have retained an identity which can be clearly discerned in their facial expressions and in their outlook upon life.

In these three great streams of civilization one finds elements which are entering into the life of Canadian people. Canada not only has her geographical

areas, which are being united into one through the development of the means of more rapid transportation; she not only has her provincial boundaries separating one group of people from the other; but she has, in an equally marked degree, divisions of racial streams, ethnic boundaries, separating one people within the same city or province from another No greater task is before the Canadian people than the co-ordinating of all the racial groups into a blended whole. Just as the individual colours of the spectrum are in themselves beautiful, so all peoples have those things which are to be admired, but it is the harmony of all colours in the glory of the rainbow that stirs the fullest admiration. So it will be as the peoples of all races happily



A lassie of German stock in Roumania, outside a steamship office where she is applying for permission to migrate to Canada.

mingle their lives together in this new land that Canadian civilization will become most beautiful.

For a fuller appreciation of the non-Anglo-Saxons in the Dominion it is necessary to know something of the reasons why they leave the lands of their birth. To launch out upon the

great adventure of saying good-bye to the dear old homeland where their loved ones live, where their own language is spoken, where their national allegiances are held so dear, and to come to a land so strange and at first so bewildering, requires real courage. No wonder some of the new-comers bring with them a little of the soil from the homeland which they ask to have buried with them!

There are many reasons why these people have started out upon the pilgrimage from European villages, towns and cities, across land, water and land again to the Canadian prairies. Three main causes have influenced many thousands in the past few years, the first being that there are too many people in most of the European countries. One of the most difficult problems.



A fine specimen of Bulgarian farmer, of the type amongst immigrants to the Dominion.

facing practically all European countries to-day is that of dealing with the surplus population. There are more people than the land will support. It is true that, especially in the northern countries, the families are not as large as they used to be, but the advance in medical science and in child welfare work has lessened the death-rate and an increase of population is the result. Every country has a limited geographical area. It is difficult for Canadians to realize the "suffocating" conditions under which practically all European peoples have to live, for in Canada there are only three persons on an average for every square mile. In

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A sturdy young woman just off to the fields to start her day's hard toil in Hungary.



In the little village of Brylince, Poland, this barefoot Ukrainian woman was seen going to the church service on Good Friday. Note the fine needle-work on the sheep-skin jacket.

Europe there are no less than 120 persons to the square mile. In a large stretch of better territory reaching across the centre of the continent, there is an average of 300 to 400 persons to the square mile. It is possible to travel hundreds of miles in central and southern Europe and see nothing but



Hungarian farmer with wife and children. The friend, to the left, is we ring t'
Hungarian winter coat.

farms which are only four or five acres in size. The poisoning cases which came to light in Austria last year had their genesis in the hunger of some of the people for more land, and to secure it they had to remove some of the older folk, and they went about it in rather a crude way.

If every man, woman and child of the world were placed in Canada, the density of population would not be as great as it is in Belgium to-day. The little folk of Holland are facing a critical situation. In actual size, the Netherlands have an area of 13,208 square miles, which is only half the size of New Brunswick, with its population of about 400,000. Fifty years ago there were only four million people living in Holland. To-day there are nearly eight millions and what has happened in many cases is that the original owner of 100 acres of land has divided the farm among his sons. Then the sons have again divided it among their sons. The grandsons of the original owner have only about 10 or 12 acres

and now the greatgrandsons—the generation of Hollanders—are son perplexed. It is no wonder that r them find it necessary to migrate of the non-Anglo-Saxons in V Canada left the old homeland there were too many people in and some had to get out or star comparison of parts of Canada with some of the European lands will illustrate this fact still further. Consider the three western Provinces.

Manitoba has an area of 251,832 square miles and a population of 663,200 people.

An area of approximately the same

size in Europe includes: Country Population Area in square miles Poland.... 149,140 27,372,447 Austria.... 6,525,661 35,901 Hungary.... 32,369 8,160,000 Holland..... 13,208 7,416,419 Denmark..... 16,570 3,434,551 Total.... 247,188 52,910,078

Saskatchewan has an area of 251,700 square miles and a population of 866,700.

An area approximately the same size in Europe includes:—

Country	Area in	Population
Germany Czechoslovakia	185,889 54,877	62,348,782 13,613,172
Belgium	11,752	7,874,601
Total	252,518	83,836,555

Alberta has an area of 255,285 square miles and a population of 646,000.

An area approximately the same size in Europe includes:—

Country	Area in	Population
sq	uare miles	
Roumania	122,282	17,393,149
Bulgaria	39,324	5,483,125
Jugo Slavia	96,134	12,017,323
Total	258,240	34,893,597

It will be seen from these figures that the popula* in the European lands,

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from which so many of our immigrants come, is anywhere from 50 to 100 times as dense as in the Prairie Provinces. This pressure of the surplus population naturally tends to compel migration to those parts of the earth where there is a surplus of land, and this is one of the main reasons why the peoples of crowded Europe seek the wide spaces of western Canada.

A second main cause for emigration is the struggle for life amidst unfavourable economic conditions. Where there is a surplus population, many serious economic problems soon arise. European countries are passing through a period of much distress. The industrial and professional classes have been greatly embarrassed as a result of the introduction of labour-saving devices of all kinds and by the shutting out of their products from other countries by the raising of high tariff walls. There are nearly six million persons listed as out of work in

(Continued on page 214)



At a corner of the market-place in Arad, Roumania. Many fine types are to be seen in this section, which previously was a part of Hungary.



A happy friend at the market place. Note typical Hungarian work on trousers.



A German farmer and his grandson.

Note the wooden shoes.



Scandinavian emigrants starting their journey across the seas. The thousands of paper streamers in the picture were thrown from the ship to friends saying farewell from the pier.



A fine Hungarian type of worker in the fields. The day is long, the work hard, and the pay small.



A Bulgarian woman who has just been to the village well for water. She is one of the wiry sort.



The immigrants from Central Europe come to one of the ports for examination by Canadian officers. In the picture are seen men of eight nationalities who gathered at Bremen, where they were examined by the Canadian Government medical and civil officials.



Hungarian youths who are waiting outside one of the churches in Hungary, prior to the opening of the service. They are rather proud of their high boots.



A farmhouse in Hungary. Note the scarcity of large windows and that the outer walls are decorated with wall-paper.



These young men were visiting in a Hungarian hamlet. They illustrate the typical garments of the youth of rural Hungary.



Friends at Gotenburg, Sweden, saying goodbye to Swedish folk leaving for the United States and Canada.

(Continued from page 209)

six European countries and the number seems to be on the increase. The more highly industrialized a country is, the greater the suffering amongst the working classes. Life has become unbearable for many in most of the large cities. In Budapest, for example, the people look each morning to see the number of suicides reported for the previous day, just as in this country the people turn to the baseball or hockey scores.

The great majority of people in Europe have to look to the soil for their livelihood, and, as so many of them have but little patches of ground, it

whole day for 12 cents and their meal of soup and bread. Motor-cars are practically unknown amongst the maiority of central and southern European Imagine passing through vilfarmers. lages a few miles from the well-known city of Przemysl and having the little children, drawn by curiosity, run to see a motor-car, even though the school bell was ringing! They seemed more excited than Canadian children are when an aeroplane passes. In Hungary one sees more horses shy at a motor-car in a day than will be seen in Canada in a year. In a fine village of 1,700 people in Moravia in Czechoslovakia last year, there



These young women along the way in Czechoslovakia were quite willing to be photographed, but one of the "beasts of burden" was doubtful of the process. Often cows are milked in the morning, work on the fields or roads all day, and are milked again at night.

seems that most of them are having a struggle to keep body and soul together. In Galicia, in Southern Poland, and in many other parts of Europe, there are practically none of the luxuries to which the average Canadian farmer is accustomed. The houses are small and poorlooking. Many of the men, women and children work barefooted in the fields for long hours. The meals are of the very plainest and often the people taste meat only twice a year. In Slovakia women will work in the fields for a

was only one person who owned a motorcar and he was a builder who needed it for his work. There was but one telephone for the entire community. The poverty of the people is illustrated by the expression of a man in one of the largest cities of Europe, who said: "Living here means that if you have sugar in your tea, you go without butter on your bread." It is pathetically true that in some parts of Europe people are literally living on the verge of starvation for four or five months of the year. These people, amidst their poverty, hear of the success of many of their friends in Canada. They know that all is not sunshine in the new country, but they do know that land is available, and that with hard work and fair success, a good living with plenty of food and clothing is possible. They therefore look with longing eyes to Canada and are ready to leave the old homeland for the new.

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The third main cause of emigration is the situation in which minority groups find themselves. In the statistics of immigration issued by the Canadian

The Roumanians came into Canada. explanation of the apparent discrepancy in the figures is very simple when one understands the perplexing problem of the minority groups in Europe. Germans and Hungarians who entered Canada from other than their own countries came, in all probability, from areas where minority groups exist. Those from Poland and Roumania, who were other than Poles or Roumanians, also came from those countries because they had been living in them as minority groups. Many of the immigrants to Canada of the past few years have come



A Danish man and his wife and four children, who had just passed the Canadian National Railway's officer. These people were going to the Maritime Provinces to settle.

Government one is often confused because, for example, the number given as entering Canada from Germany does not coincide with the number of Germans who come. The same is true of the Hungarians and others. In the figures for the year 1928-1929, only 3,854 are recorded as coming from Germany, but 13,215 Germans arrived. Only 5,177 came from Hungary, but 6,242 Hungarians entered Canada. On the other hand, though 25,945 are reported as coming from Poland, only 8,269 Poles reached Canada. Reported as leaving Roumania, are 4,860, but only 284

because of the intolerable conditions which faced them, due to the changes of national boundaries since the last War.

It is well to consider the minority problem which has been responsible for migration to Canada in recent years. There are 10,000 miles of international boundaries in Europe and no less than 6,000 miles of these are new since the War. For instance, Poland has been practically non-existent for more than 100 years—but now it has been resurrected, and parts of Russia, Germany, and Austria have been given to make up this new Republic. Czechoslovakia has



The market-places of Europe are amongst the most interesting and picturesque of scenes. This flower seller in the market in Prague was very happy in her work.



This Hungarian peasant, digging his patch at the side of the road, is over 80 years of age.



Two bright little school girls met just as they were returning from school for their lunch. There is much real poverty in Hungary. Many of the little folk go to school without shoes.

been created out of parts of Austria and of Hungary. Jugo Slavia has been created out of Serbia and parts of Austria, Hungary and Bulgaria. Roumania has been made larger at the expense, chiefly, of Hungary. In all these transitions, involving the rearrangement of boundaries, there have been left, in the areas which have come under new governments, people who were formerly under the governments of the previous owners of the territory. These people find themselves in what to them is a foreign country, although they have not necessarily moved out of the houses in which they were born. They find themselves changed from belonging to the great majority in their own country to being in the minority in a foreign country. This makes their lot an undesirable one. To make this more clear, consider two concrete examples:

The western territory of Poland was a part of Germany before the War. For

many generations the owners of the land in that particular area have been Germans-living under the German flagrepresented in the parliament at Berlinand sharing, either for good or for ill, the destinies of the German nation. Their interests and relationships, as well as their future, have been wrapped up with the lot of the German people. Now the new boundary between Poland and Germany has been established. One night these German peoples retire to rest in their own Fatherland; next morning they find themselves living in Poland. A different flag is flying over their public buildings. New money and postage stamps have to be used. Politically they must look to Warsaw instead of to Berlin. They are no longer a part of the German nation, but are a minority under the rule of Slavic peoples-former enemies. In order to strengthen their border defences. the Poles are naturally endeavouring to dominate in the very area where the minority group of German peoples live.

Then, the situation of the Hungarians in Czechoslovakia, Roumania and Jugo Slavia can best be illustrated by reference to the map at the end of this article. This map shows in the black and shaded areas Austria and Hungary, as they were



Mother and daughter at the marketplace, Nyireyyhaza, Hungary.



Little flower sellers at the market square at Przemysl, Poland.



A happy group of school children on their way home, near Bremen, Germany.



The husband of this matron moved to Canada from Denmark two years ago. He has made good and now the mother and seven fine children are seen on their way to Canada under the auspices of the Canadian National Railways.



A group at the steamship office at Bremen, awaiting examination by Canadian officials to judge of their fitness as new Canadians.



A group of school children in a Moravian village in Czechoslovakia. Unless one were told that these were Moravians, it would be difficult to distinguish them by their features from the school children of many other countries.



Outside the steamship office at Warsaw. These people are on their way to Danzig, where Canadian Government officers will give them their final inspection.



Danish villages are very clean and neat and usually quite attractive. This place has a "model city" look about it.

before the War. The solid black sections indicate Austria and Hungary as they now exist. The perpendicular ruling represents the sections of Hungary which have been given to other countries since 1918, and the horizontal shading, the sections of Austria given to other countries. Before the War, Austria had more than 100,000 square miles of territory and a population of nearly 30 millions.

To-day she has only about 35,000 square miles and a population of between six and seven millions. Practically the same reduction in area and population has overtaken Hungary. The feeling in these countries is very intense. One of the national sentiments of Hungary, which is learnt by the school children, and is used at many public meetings, is: "I believe in God; I believe in my country."



The stork and her nest on the roof and chimney of a Galiacian village cottage in Southern Poland.



A typical Hungarian village. The village well is in the foreground. The houses are thatched with straw.

I believe in the everlasting justice of God; I believe in the resurrection of Hungary. Amen."

In Budapest are four impressive and significant monuments with one word on each. One is placed on each side of a central square near the Parliament Buildings. The four words are "north," "south," "east," "west." These monuments silently proclaim to the world the heart grief of Hungary in that "north," "south," "east" and "west"

her territory and her people have been torn from her! One part of Hungary has been given to Czechoslovakia, another part to Roumania, and still another section to Jugo Slavia. When after a war, the boundaries are moved into a country, it is not possible to bring the people back at the same time. Consequently there are in the neighbourhood of a million Hungarians who are left in Czechoslovakia; about the same number in Roumania; and about half



A typical village in the Moravian section of Czecho-slovakia. Most of the farmers live in the villages and drive to the fields. At the rear of the houses along the village streets are the barns and stables.



A group of Finnish men and women on board a steamer leaving Gotenburg for Canada.

a million in Jugo Slavia. These Hungarians who find themselves in a foreign country as a result of boundary changes are known as minority groups.

are known as minority groups.

It is estimated that the German,
Hungarian and Bulgarian minority
groups living in other lands total the
equivalent of the population of Canada.
In addition there are the minorities such

as the Ruthenians in Poland, the Ukrainians in Russia, and others which might be mentioned.

Politically and economically these minority peoples have a difficult time. Any government naturally prefers to see its own people in possession of the country near a newly-established border, and the way is often made "unpleasantly



View of Prague, the capital city of Czechoslovakia, a city which is fast becoming one of the leading centres of Europe. The view is from the Palace Hill, the centre of the government of the New Republic.



Map of Austria Hungary before the war, (extending to the limits of the shaded portions) and after the war (the solid black areas only).

easy" for any in the minority groups to leave the land in which they find themselves so awkwardly situated. The

Poland is the home of this mother and child. Mother enjays being photographed, but baby takes offence.

treatment of the minorities is one of the vexing problems continually recurring before the League of Nations.

It is evident that the minority peoples have become migrants by the very change of the boundaries around them. Their country has been moved from them. They are strangers in a foreign land. They therefore look for a place where, instead of opposition, they will find friendship; in place of political and economic limitations, they will find fair treatment and opportunity. That is why so many of them turn their gaze westward and wonder if they, too, had not better follow the way which leads Canada-wards.

To sum up-It has been shown that Canada has received streams of life from Teutonic, Slavic and Mongolian stock through the migration of hundreds of thousands of these people who, because of surplus population, poverty and minority embarrassments have been compelled to leave their own homelands in Europe and migrate to a country where there is land and opportunity and freedom. These non - Anglo - Saxon peoples have a contribution to make towards the development of this new country. Their best gifts will be available only as all the races and nationalities within the bounds of the Dominion recognize and appreciate the worth of others, and as all work together for the advancement of those things which in the life of a nation will make her truly great.



A genuine Tayal head-hunter. The tattoomark on his chin indicates that having "taken a head" he had attained man's estate. Note his wealth of garters, even if his legs be bare. The long, fan-shaped knife at his waist is the head-cutting weapon.

Skull-Collectors of Formosa

By CLARENCE GRIFFIN

FORMOSA" is the Portuguese word for "beautiful", and appropriately forms the name of the radiant island off the east coast of China, discovered by Portuguese navigators almost five centuries ago. Geographically and geologically part of China, it was ceded to Japan as a warprize at the close of the Japan-China War of 1894-5, and is now the most favoured colony of the Japanese Empire. The

island is of exceptional natural wealth, containing 90 per cent, of the camphor trees of the world, abundant timber, prolific subtropical forests and fruitpalms, besides rich seams of petroleum, coal, gold, and less familiar minerals. Four million Chinese-born "Formosans" form the main populace, diligently cultivating rice on the terraced foothills and plains; while in the massive mountain ranges, in which 49 peaks tower over 10,-000 feet, there are the residues of eight distinct aboriginal peoples, subdivided into 723 tribes, numbering about 150,000 persons, and constituting an enigma to even the bestinformed anthropologists.

Amongst these are the head hunters who achieve a great deal of publicity of one sort and another.

The island is about 235 miles long by 70 miles broad, lying in the sub-tropics, shaped, appropriately enough, like a tea-leaf, as \$5,000,000 worth of Formosan 'Oolong' tea was until recently annually exported. At present both tea and camphor exports are suffering from depressions.

The subjugation of the head-collecting aborigines has been an expensive and so far unsolved Japanese colonial problem. As recently as October of last year there

was a "savage outbreak," the news of which reached into the front pages of Occidental newspapers.

Occidental newspapers.
You believe that "two heads are better than one" don't you? So do I. and even our untamed brethren of the wilds of Formosa agree with us on that. They go a step farther than we do, for they carry that slogan into practical effect by accumulating not only duplicates or three of a kind, but by piling up

tens, scores, or even hundreds, especially when a chieftain has to maintain the leadership of his tribe by going one better than his runner-up.

The mountain braves of Formosa proudly display their skull shelves, often containing 100 or more trophies gathered by one man, and it is stated (I believe truthfully), that the record was held by a chief who claimed to have personally sliced off single-handed the 500 skulls he boastingly exhibited.

Since Formosa became a colony of the Japanese Empire, head-hunting or skull-collecting has become technically illegal, and is, therefore, suppressed as far as possible. The authorities

even order the destruction or dispersal of the skullheaps to prevent the owners gloating over their deeds of bravery and thus rousing others to emulation. But old appetites and tribal customs are often too strong, and gangs of irrepressible zealots break out and pounce upon their neighbouring enemies.

The rules of this barbaric game prohibit the taking of a head from your own party, tribe or people; it must always be that of an "outsider". Men lose their heads more readily than women, as the men hunt away from home and protective company, while the women keep



CLARENCE GRIFFIN

was born in London, England, and at the age of two was taken to Japan. He was educated in Victoria Public School, Yokohama, and afterwards at Priory House Academy, London, again returning to Japan. Altogether he spent 44 years in Japan, 30 of these in commerce and the last three on the Island of Formosa as lecturer and instructor in the Colleges and University of Taikohu. He is now a resident of Toronto.



The homes of the Tayals of Formosa are made exclusively of bamboo and rattan,—
not a stone or nail is required to build these suitable residences.

together in the comparative safety of the hamlets.

So fiery and cave-mannish are the 15,000 members of the Bunun family in the east-central district of the island that their section has still to be surrounded by a strong wire fence 35 miles long, which is charged with fatal electric current from sun-set to sun-rise to prevent them from stealing out under the cover of darkness to collect the heads of their neighbours,—the Tayals.

These Tayals dwell on the northern boundary of the Bunun area and not so long ago were even more zealous in the collection of skulls than their eager neighbours. There are 26,000 Tayals. The men are splendidly built, muscular fellows, keen hunters, skilled marksmen with bow-and-arrow, blow-pipe and spear, and champions with the neckslicing kris. Their women-folk are industrious weavers and good housewives. As the Tayals are coming into closer touch with the Japanese control and influence they are checked in their head-

hunting activities and are turning to industries such as forestry, mining and

South of the Bununs, scattered among the massive ranges of mountains which form the lower section of Formosa's backbone, are the vigorous Paiwan people. There are about 22,000 of them, divided into 110 tribes, so there was "good hunting" in the old days before the present "close season" in skull sport was enforced. Tribe collected from tribe, for the Paiwans preyed upon adjacent clans and there was always the pleasing variety of a Bunun raid.

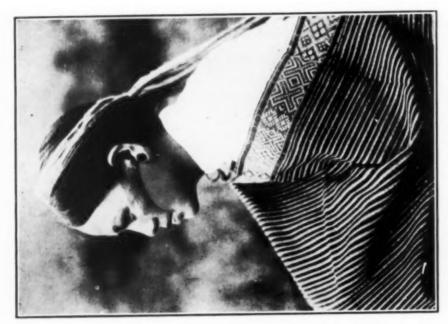
Ninety per-cent of the natural camphor required by the modern world comes from Formosa. It is gathered from the thick jungle of the Paiwan and Bunun section of the island. For centuries the Chinese crossed from the mainland eager to exchange beads, buttons, cheap jewellery, red dye, knives, and even fire-arms for the highly-valued chemical. During the last 35 years, however, the Japanese have arrived with



Said to be the oldest male savage in Formosa. He claims to have seen 170 summers!—and is still able to shoot straight and hold his own in the hunt for animals, (or heads). He has "kept his head" fairly well, considering the conditions under which he has been living.

gangs of coolies who, without asking "by your leave," have hewed down the trees and dragged them away. The head-hunters considered it part of the game to pounce upon these camphorcoolies and deprive them of their heads. In turn, therefore, these tree-fellers had to be protected by well-equipped Japanese soldiers, and these, too, were additional grist to the mill of the skullcollectors, for the advantage was almost always on the side of the aborigines. They knew every foot of the ground. Each tree and rock behind which they could lie in wait, was familiar to them for decades, and with an unerring aim they would snipe their "man" with silent arrow or blow-pipe. Japan has lost hundreds of her bravest sons in the jungle-like camphor forests of "The Island Beautiful" for even well-equipped modern infantry, or still more up-to-date airmen, have made little impression on the well-entrenched mountain-men of Formosa.

My first intimate contact with genuine head-hunters was in the Paiwan section. I was a sort of fifth wheel to a semiofficial quartet of Americans. One was a "friendly student" visiting Japan to cement collegiate fraternity. Another was a stalwart youth, one of my old Boy Scouts from Tokio, where his parents are missionaries of the "Friends" organization. The third was a professional platform lecturer from the western United States, and the fourth an American missionary driven out of China by the recent upheaval. I, a cockney son of Erin of over 40 years' residence in Yokohama, but now teaching in the Government Colleges of Taihoku, Formosa, was eager to accept their invitation to join them. Held back by duty. I started alone three days late. but covered the ground fast enough to overtake the others before they reached Riki-riki. If you ever visit Formosa and wish to see the real native skullcollecting gentleman in his home



Bunun maids at the age of seventeen are heavily tattooed across the cheeks. Earlobes are pierced to hold the thick tasselled ear-sticks.



A dainty Tayal maid who, though her people be "skull-collectors," is dignified and modest. She wove the shawl in which she is draped and made the decorated bodice which so well becomes her.



This is another view of the heavily-tattooed marks made across the lips and cheeks when these maidens have reached womanhood.



The heavy tattoo mark on the forehead of this maiden of the Bunun people is put in before the age of five years. At seventeen additional marks from ears to mouth and round the lips are added.



All Formosa aboriginal women are spinners and weavers, producing excellent material with their primitive equipment,—in fact some of the tribes foster the belief that promotion in the next life depends greatly upon the woman's ability to make good cloth in this world. This maid is obviously not yet seventeen as she has only the "child" mark tattooed on her forehead, and not yet the "woman" cheek marks.

atmosphere, insist upon getting to Rikiriki. Sometimes the Japanese Government prohibits the attempt to reach that secluded section when the natives are on the rampage, but at the time of our visit the tribe was calming down after a recent outburst and we needed only a limited armed guard, which was formally "changed" at recognized points along the mountain trail.

Personally I find the head-hunters very fine fellows. They have a tradition or worthy belief that we "white folks" are their friends. They do not like their Asiatic neighbours. For centuries they suffered severely at the hands of the Chinese, and were not ready to take kindly to the Japanese rulers who succeeded them. They classify humans into two groups. First, themselves and similar people who are "real men." Second, all other Asiatics, Chinese, Japanese,

and so on. They explain that we Europeans or other whites are obviously not Asiatics and must belong to the "real men" class, just as did the worthy Dutch pioneers who actually possessed the Island of Formosa for 38 years (1624-1662) and who by their honourable treatment even of the "savage" headhunting aborigines left the lasting impression that "white folks" are trusted friends. I have wandered fearlessly alone and unarmed along some of the unfrequented trails and forest tracks of the Island Beautiful, but have never been molested.

Perhaps my Irish blood prompts me to consider the snakes with which Formosa is generously provided as being more repellant and dangerous than the aborigines and their skull-collecting customs. When on a lonely trail I see a real mountain native approaching I invari-



A study in human expression. A group of Paiwan (Formosan) aborigines keenly watching athletic contests.

ably stoop as if intently examining a flower, stone or insect, keeping my crouching pose until the man is right up to me. That attitude seems to give him a sense of superiority and condescension which I believe he is too much of a gentleman to abuse. Moreover, my appearance is not one of attack or even of defence, so he has no reason to fear me. Then, glancing up with a smile of halfsurprise, I somehow feel the air of friendship and although our mothertongues are not on speaking terms we always seem to understand at once that we are kindly disposed towards each other. I revel in such contacts, and find even greater delight if, as is often the case, the "savage" happens to be a child.

I always travel well-equipped with small trinkets or bird-like toys, for the children, and these act as readily-understood interpreters of my friendly sentiments. The kiddie takes a toy, grins or even giggles, and patters off to its hidden home to tell the folks about the strange creature out on the track who brought the toy. Then out they come, sometimes cautiously peering round the bushes, and then more boldly, until close enough to accept another "interpreter," and possibly one of the villagers can be found knowing enough Japanese patois to express a word of welcome or thanks.

About 35 years ago, some enterprising Britons persuaded two small parties of "Formosan savages" from the Subon and



Hardly sufficiently commodious and comfortable for folks like us, especially if we require a grand piano, or a billiard table, this is a highly desirable residence for a Tayal Formosan. It is built entirely of poles, bamboos and rattan. So well-joisted and bound is it, that it withstands even the tropical typhoons, swaying like a bird's nest, but never crashing.

Kusu-kusu tribes of the Paiwan group to safely, and were so deeply impressed by travel all the way to London to form an their kindly treatment and other exattraction in a "Formosan Village" at an periences that, to this day, if any white-exhibition. They went and returned face visits their hamlets he will be



The Bununs of Formosa are still desperate head-hunters,—but they also respect "fast friendship" and after drinking thus out of the same cup at the same time, they are "sworn friends for life." It is like drinking coffee with an Arab, or eating salt with a Persian. Note the exceptionally long, claw-like hands of the man on the right.

greeted with a cheery "Good-day-thank-you" which form the English vocabulary Riki-riki. After a strenuous hike under a home-folks on their return.

But to re-join the party tramping to absorbed on the trip and taught to the relentless tropical sun, during the last four hours of which we had clambered up

a steep trail over a rocky ridge, we crossed the shoulder of slaty cliffs and had reached our highest point,—very different from the radiant orchid-scented forests and perplexing tropical verdure we had traversed in the morning. Once across the crest we started downward, for there, some thousand feet below, so sheltered as to be almost in the gloom of night while we were still scorched by the slanting rays of the setting sun, was our goal, Riki-riki. Just a cluster of slate

garments, lined up where the trail reaches the first hut, and to there bow their greeting and respect. So there they were, two fine rows of healthy lads and lassies of genuine Paiwan stock. Scared into rather stiff attitudes they bent over at the word of command and then stared unblinkingly at these five pale-faced creatures constituting the most curious human exhibition that had ever visited their part of the universe, differing much from themselves, and yet



Of the nine distinct native peoples of Formosa, two are high in primitive musical art. Here is a "wind-and-string" quartet. The lady on the right has a bow-harp held in the mouth, steadied with the left hand and twanged with the right. The lady on the left has a tuneful bamboo jew's-harp. The artist next the harpist has the familiar bamboo mouth-flute, while the man further left operates a pair of nose-flutes, one for each nostril.

huts, almost perilously lodged on a ledge of slate, like nests of cliff-swallows or rock-thrushes. We clambered down. Official warning had preceded us, stating that the largest group of white-faces the hamlet had experienced was about to enter and would remain all night. Riki-riki boasts a school under the rule of a Japanese policeman. The policemanteacher had been instructed by his superiors to have the full muster of students suitably arrayed in their parade

even more unlike the Japanese and Chinese, both in features and in speech.

These Paiwans have lived here for 3000 years,—at least tradition, legend, and even Chinese history furnish shadowy traces of their arrival from the south "about" that long ago. Surely such a lengthy tenancy justifies them in considering the land as theirs. We are merely modern, vulgar, gaping intruders, poking our ugly noses and weak bodies into their houses or huts, thrusting our-

selves uninvited into their most intimate affairs. They are right when they consider us as stupid, clumsy, loud-voiced and eccentric. We stumble along on our heavy-booted feet, while their bare feet are so firm, silent, never-slipping. We couldn't hit a springing deer or charging boar with spear, dart or arrow even at close range, and we would probably die of thirst before we discovered the nearest spring or produced fire by friction for our night-camp.

To collect an enemy's head is not wrong! It is simply, to them, a proof of bravery, and bravery is a virtue of all real men. If to demonstrate my manhood I go to gather a head, and lose my own in the effort, that is, in their reasoning, sufficient evidence that I am not brave enough to defend myself and, therefore, not worthy to live! No maid will listen to a wooing lover until he has tested his manhood by gathering at least one skull (besides the one he was born



The Sacred Dance of the Ami people of Formosa. The action is slow, sedate, rhythmic, accompanied by throbbing "tom-tom" tones produced by striking hollow sections of tree-trunks.

Such poor helpless creatures we seem to them to be! They, keen-eyed, well-developed sturdy children of nature, are trained to an even higher moral code than that which we are supposed to follow. Theft is unknown amongst them. They teach and practice that, "Your things are yours—I must not even touch them, and you can always trust me to do them no harm." This protection applies to wife and other women-folk as strictly as to any item of possessions. To them lying is criminal. To deceive any member of one's own tribe is unthinkable.

with), and bears permanent record thereof by the tattoo-mark on his chin. That mark is pricked in by the priestess of the tribe as soon as the youth brings in his first trophy. He is not even rated as a "man" or allowed to join the camp-council until he has thus proved his prowess.

If on any occasion an intense dispute arises between two members of the same tribe, the point is not settled by striking or inflicting bodily harm on each other. They are both dispatched in different directions, and he who first returns with



The tribes of the Paiwan people of Formosa living in the higher ranges of the south, build entirely of slate, bountifully provided by the cliffs around them.

Slabs are used for walls and scales for roof.



Men and women of the Ami people preparing for their annual dance, which is semi-religious and dignified.

an enemy's head thus proves his point in the debate, or establishes his innocence in the disputed question. Of course, if either one does not return, having lost his own head in the effort, that is regarded as conclusive proof that he was in the wrong from the start!

We were invited to be the guests of the chief of the Riki-riki tribe. He was a man of about 30, keen-eved. round-featured, friendly. Erect of carriage, he stood well-poised on his firm splaytoed feet on the slate-paved court before his hut. To show us special honour, he retired, to appear later in his full war-paint or official robes. He was then, indeed, worthy of our full respect, arrayed in his coat of panther skin and with the crest of boar's talons adding to his princely stature. His wife also adorned herself, beads, bangles, bracelets and necklaces adding to her charms. It was explained that she had equal rights; in fact, she was really the "head of the house," the man having married into her family as is often done when the headhouse is heirless or when the tribe is matriarchal, the man taking the woman's name, being under her orders, and continuing the wife's family line.

Through a police-interpreter we assured the chief of our deep appreciation of his hospitality and courtesy.

Again, on this occasion, the little toy birds helped to convey our kindly sentiments, and we were invited to enter the chief's residence, a low squat building, constructed entirely of slate. Mother nature generously supplies ample building material in that district. Great slabs slip off the cliff-face and are used for the walls, while the smaller pieces are suitable for roof-tiles. By adaption of cantileverage the entire hut, of one



Many of the 723 tribes of Formosan aborigines tattoo the face, but the Paiwans tattoo only the hands of the wife of the chief. This chieftainess in her state robes and jewels is proud of her dark hands which testify to her high station.

spacious apartment, had neither pole nor post, no visible roof-support, nothing but slate.

The entrance or door-way was low, barely four feet high, usually kept so on purpose by a carved log or totem-like pole laid across the lintel, so that if ever an enemy should chase the routed chief and drive him to seek shelter in the hut, it would form a death-trap for the pursuer, for the chasing enemy would be



This chieftainess of the Ami people, though not given to head-hunting, tattooing or other barbaric customs, is nevertheless fond of jewellery and adornment.



Note the thick tasselled ear-sticks this young Bunun maiden wears.



The skinny hands of this veteran chief of Formosa have doubtless often drawn the slicing-knife from its fin-tailed sheath,—and one swift upward slash would take a head. One wonders what thoughts lie behind those old keen eyes, of what hand-to-hand duels those lips could tell, and how many gory heads those claws have hurriedly packed into the sling-bag provided for that purpose.

Like all other self-respecting countries, the Island of Formosa possesses an "oldest inhabitant." Here she is, pausing in her daily task of gathering faggots for the tribal camp-fire. She claims to have been "going strong" for 220 years, and is certainly far advanced in age, though her arithmetic may be at fault.



Formosan Tayals grinding the wild-corn which forms the "meal" of their menu.

compelled to stoop as he entered, and the chief waiting within would slice off his bowed head.

We chatted with the chief as well as the broken interpretation would permit. Squatting on wooden blocks on the slate floor, we even asked his views of life and death. He frankly explained in detail that when he died, he would be buried "just here"—and he pointed to the spot on which he was sitting, and where he slept every night. His predecessor had been buried under "that" corner (pointing to the one behind us) and the one before him, in "that" (indicating another). When all four corners were thus "in-



A Paiwan chieftain and his guards. The coat of leopard's skin indicates the chief.

habited" the hut would be considered permanently full, and a new one would be provided for the following chief. These graves are hacked out of the slate to a depth of about six feet. Throatcutting knife and many of the chieftain-insignia are laid with the body, and the hole filled.

When that had been done to his visible form, his spirit would leap across the

gorge outside, and would be detained for some time on "that mountain,"—and he indicated the massive, rounded head of Mount Daibu out beyond the chasm, on which he said the shades of the worthy dead remained for some time in frequent intercourse with heavenly visitors who trained them for a higher life into which they would graduate when sufficiently educated.



Rather a strain on the head and neck of the man, but quite pleasant for the lady rider. The tobacco crop looks promising.

We even asked him "How did this world begin?" and "Who was the first man?" He was ready with his answer, given, as was all his talk, in a high, almost falsetto, voice, quiet and unhesitating, for he was speaking of his beliefs.

"The world started with three eggs," he said. "Out of the first was hatched a man, out of the second came a woman, and from the third issued a snake. That was the commencement of life."

The neighbouring Ami people have a different tradition. They state that all life began with snakes, which crawled about freely and "peopled" the earth. One day a snake was pricked by a thorn, and in its smarting frenzy reared up on its tail and writhed about, almost erect. He persisted in this method of locomotion until nature adjusted him to his new environment and needs, by developing little legs and feet, and finding the

walking method of progression more pleasant than crawling, he kept to it, and thus became a man, the progenitor of us all. I like that rather less than the three-eggs theory—but there it is.

Other Formosan aboriginal traditions ascribe the start of the human family to a thunder-bolt striking a rock, which cracked open and thus released a man and a woman.

But whatever their explanation of their origin, all the nine distinctly different aboriginal groups of Formosa appear to have well-grounded beliefs in a great beneficent spirit who wishes them to be good, and who helps those who try to live rightly, so that in time they may pass into a better existence when death releases them from this.



One of the chieftains of the Paiwan tribes. His coat of leopardskin, and still more the head-rosette of boar's talons, indicate that he is a worthy hunter and has attained his high rank by prowess. His hands grasp the familiar head-cutting knife.

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A Tayal Formosan skull shelf. In southern Formosa, the massive slate cliffs provide good material for skull shelves, but in the north the Tayal head-hunters prefer racks of bamboo.



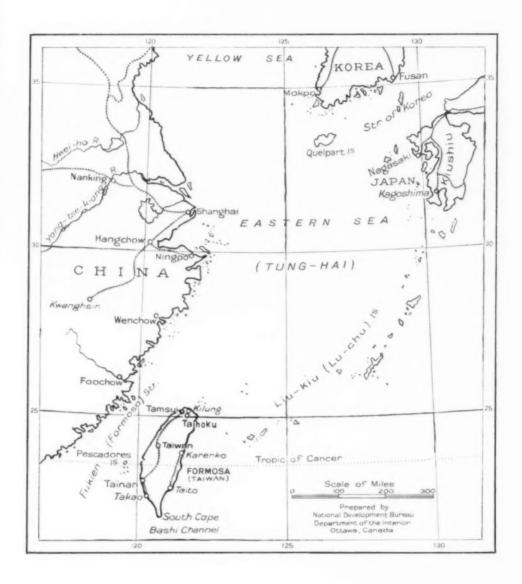
The skull collection of a Paiwan Formosan chief. In the mountain heights of southern Formosa, the slate-cliffs provide abundant material for these shelves, which like our familiar extension book-cases can be added to as the skull-collection increases.

While thus referring to the metaphysical view of things, it is interesting to turn to our well-informed friend, Mr. John Chinaman, for his explanation of the birth of the island of Formosa itself. It is a stupendous mass of mountains, with 49 peaks 'owering over 10,000 feet, abruptly sliced off on the Pacific side into gigantic cliffs dropping sheer 5,000 feet to the water, and continuing another 1,000 feet before reaching the ocean bed. No such cliffs exist elsewhere, not even in the Grand Canyon of Arizona. The entire group of the Philippines can only show one point over 10,000 feet and even the Island of Borneo, 20 times the area of Formosa, also has but one. In Formosa there are gorges, chasms, caves, old volcanic craters, and still-active vents with steam.

Chinese tradition explains that on a summer's day in the distant past two huge dragons swam out of the Min River to enjoy a bathe in the Pacific Ocean. Frolicking along the coast, diving and splashing, in their stupendous energy they threw up so much rock and mud that the island of Formosa was heaped together. Then, with special heavings and wrigglings, they stacked up the mountains, and, crawling into them, went to sleep after their exertions. Now, as they snore in their sleep and occasionally stir, there are roarings from the earth, the steamings which are the breath of dragons, and a few extra earth-quakes.

When earth-shocks become numerous and severe, the Chinese-born Formosans understand that their idols in their temples are restless and require exercise, so they are "given the air," being paraded through the streets until the earth spasms quieten down.

But to revert to the mountain aborigines. The 32,000 Ami people, divided into 84 tribes, inhabit the highlands of the eastern coast, living in many cases on the edge of massive cliffs which are too high to permit of fishing, but which develop men of exceptional hardihood



The map illustrates the relationship of Formosa to China, Korea and Japan.

and bravery in other ways. These Ami people are devout in their religion. The tribes combine twice a year in a massed national pageant and dance. The Ami folk are said to be the last to have reached Formosa for settlement some 2,500 years ago. But where they started from, and how they came, are unanswered questions. They are the least "savage" of the nine aboriginal Formosan peoples. They do not collect skulls, nor do they even tattoo their faces.

The Amis smoke tobacco. They have smoked for so many centuries that I wonder if Formosa were the birth-place of the "weed," just as it was of camphor. The tobacco plant grows wild, and there is no trace or suggestion that it was ever introduced. The women smoke even

more than the men.

Pipes made from bamboo roots and fitted with reed-like stems are preferred by the men, but the women twist the half-dried leaves into cigars twice as long and three times as thick as those we are familiar with. Mrs. Ami starts out in the morning with one of these leaf-rolls gripped in her lips, gently smouldering, and she draws or puffs at it as she goes about her work. It lasts her all day, and she can almost reckon supper-time by the length of her "butt." Supplies of Japan-made matches, like ours, are now obtainable, but up to a few years ago, and even now in the mountain districts, fire was produced by wood-friction in some sections and by flint in others, the spark being preserved by punk which can be readily blown into a flame.

These Ami do not desire the heads of others, nor are they harrassed by their skull-collecting Bunun and Tayal neighbours, for nature has protected them graciously by a huge geologic gash, chasm or "fault," which slices off that eastern section from the rest of the island. Literally a great gulf is fixed, with the barbaric head-hunters on one side, and the unmolested, peace-loving Amis on the other.

Leopards abound in the forests of Formosa, but there are no tigers. Leopard skins are highly prized and worn by the dignified mountain chiefs as regalia. Some centuries ago a pompous Chinese mandarin of Foochow on the mainland, seeking further sources of wealth, crossed the Formosa Channel and by threat intimidation and boasting tried to extract tithes, taxes, or tribute from the "savage" inhabitants. These aborigines had no cash or any wherewithal to meet such demands, even if the imposts had been just.

The mandarin, in a sorry state of temper, retired to his headquarters in Foochow and gave orders that the largest and fiercest man-eating tiger in all that tiger-infested district should be trapped, bound, taken across to Formosa, and there liberated to terrify those rascally natives into profit-bearing subjection.

Three weeks later the mandarin again crossed to Formosa, expecting to find the aborigines cowed by the wild beast which had been sent as his representative! On landing he was met by a group of dignified natives, escorting their chief, who was arrayed in a tiger's skin!



A Natural Bridge, Georgian Bay

By WILLIAM CLIFFORD MORSE

ALONG the eastern side of that delightful strip of land constituting Bruce Peninsula and separat-

ing the blue waters of Georgian Bay from the bluer waters of Lake Huron, or, as the case may be, the blue waters of the lake from the bluer waters of the bay, hence forming two beautiful lakes where one existed before, but the Niagara limestone escarpment trendsnorth-west and the beds rise toward the north-east in such a way as to form numerous promontories, many of which extend into Georgian Bay as bold headlands of rugged beauty. Any two of these promontories form rims between which nestle smaller bays and sounds.

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One of the most striking of these promontories is Lion Head, which is at once symbolic of the allegiance of Canada and of the strength of Great Britain. North of it is Banister Hill, some of the material from the truncated end of which forms the spit sheltering

the harbour of Lion Head. Near the end of this headless headland is an unique natural bridge.

In past geologic ages the smaller bays and the sounds were parallel tributary valleys, and the promontories were dividing ridges between. Then came the Pleistocene glacier overriding ridge and valley, planing and grooving ridge, widening and straightening valley. And, as the glacier melted back in successive stages, it held the waters ponded between the St. Lawrence-Mississippi divide on the one side and its wall of ice on the other. Thus stage succeeded stage until the waters reached their present level.

But the waters of each succeeding stage remained at their respective elevation for a long period of time, carving cliff and terrace in places where rock and water met at proper depths, upturning blocks of limestone without wearing them to boulders where water was of moderate



WILLIAM CLIFFORD MORSE

who is well-known on both sides of the International Boundary for his work in the field of geology, was born in Starr, Hocking County, Chio. He obtained his B.A. from Ohio State University in 1906, his M.A. in 1908 from the same institution, and his Ph.D. from Massachusetts Institute of Technology in 1927. He was taught zoology and geology in several of the larger universities in the States, and from 1918 to 1930 was head of the Department of Geology, Agricultural and Mining College, and is at present visiting professor at the University of North Carolina. Dr. Morse is the author of over 25 books on geology and is a member of numerous scientific societies.



And even yet the waves cease not to beat. Beach outside the harbour at Lion Head.



Who placed the stone?



Natural Bridge, Lion Head, Ontario.



Huge boulder beach at Cape Croker. A most striking example of the fury of the storm waves of one of the old predecessors of Georgian Bay as they thundered against this shore, which rose from moderately deep waters.



Lion Head and paw, at once symbolic of the allegiance of Canada and of the strength of Great Britain.



Upturning blocks of limestone without wearing them to boulders, where water was of moderate depth.



A cliff carved by waves that hammered its base, and a terrace planed by waves of a lower lake; both lakes predecessors of Georgian Bay. The boulders in picture are concealed by the trees.



The side of a beach ridge more than 20 feet in height.



Glacially planed and grooved surface of the north promontory of Lion Head harbour.



Building beach and ridge where shores were somewhat protected.



Lion Head harbour, between Lion Head promontory on the south and the headless headland on the north.



A stroke of charm which God is adding to that delightful reserve of the original Americans, the native Indians, at Cape Croker. A curved spit being formed, not by along shore currents as most textbooks state, but by oblique waves.



The rim of the tubs, looking west. At Tobermory at the very tip of Bruce Peninsula where the waters of Georgian Bay join Lake Huron are two wonderful natural harbours, a larger refuge harbour and a smaller commercial harbour, known respectively as Big Tub and Little Tub.



Finally, in their down-settling, the waters halted to view, as it were, the work of so many ages.

depth, grinding all to boulders and sand where water was shallow, and building beach and ridge where shores were somewhat protected. Finally, in their down-settling, the waters halted to view,

as it were, the work of so many ages.

Among such wealth of shore-line features, it is impossible to stop the flights of imagination, to refrain from picturing the past. Here was a cliff, rising from deep water: here was a barrier beach, topped by storm waves; here was shallow water extending so far that the waves did not reach the shore in all their fury. Here was a peninsula, here an isthmus, there an island, here deep water where the automobile now runs.

Before Pleistocene and subsequent wave action

had battered back Banister Hill promontory to its present dimensions the Pleistocene glacier, in passing over the more extensive headland, planed down the Niagara dolomitic limestone in places to the surface on which the stone that constitutes the natural bridge now rests. Later, while melting back, the glacier left stranded on this surface a number of blocks of limestone, in-

cluding the one now forming the natural bridge. This particular block seems to have been rotated through 90 degrees. In any event, it was left lying across a prominent vertical As the waves joint. gradually wore the cliff back to a position near the joint under consideration, this joint, through natural agencies of weathering, became wider and wider. As the fissure broadened, one end of the slab of limestone clung to the rock on one side of the fis-

sure; and the other end, to the rock on the other side. Thus, in a most natural way, "was placed the stone" which forms the bridge—one that always provokes the question on the part of



Carving cliff and terrace in places where rock and water met at proper depths.

those who visit it, as to who placed the stone. Perchance the waters of the higher lakes swirled through the fissure, during which time the slab formed a true natural bridge. Since the waters have withdrawn to their present level, however, they fail by many feet to reach the bottom of the fissure, so that in the strict sense, the bridge, like the old shore lines, belongs to the age of long ago.

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M Amongst the New Books M

Man Hunting in the Jungle. By G. M. Dyott. Indianapolis: The Bobbs-Merrill Company. 1930.

It will be remembered that Colonel P. H. Fawcett, an English explorer, with his son Jack and a young man, Raleigh Rimell, had gone on an expedition into a very inaccessible part of Brazil, in 1925. They were to have come out in 1927. Nothing was heard from them, and finally Mr. Dyott was asked to lead a search party to discover their fate. It was no light task. The Xingu country was practically unknown territory, some of it entirely so; inhabited by savage and treacherous tribes; much of it impenetrable jungle; elsewhere a land of thirst and poisonous reptiles and insects; the land of the jaguar, the anaconda, the garapata, the man-eating piranha and the innumerable ant. This is the story of Mr. Dyott's journey, and it is very well told. He and his companions spent many months searching for Fawcett, and finally got convincing proof that the three white men had been murdered by Indians in July, 1925. After many vicissitudes and perils by land and water, they finally made their way down the Xingu to its junction with the Amazon. They carried a wireless outfit to the Xingu, and one one occasion, sitting in the heart of a tropical jungle, they picked up a conversation between the operator of the Macmillan Polar Expedition and some Canadian amateur.

Through France with a Sketchbook. By Samuel Chamberlain. New York: Robert M. McBride & Company. 1929.

An altogether charming narrative of the rambles of an artist about Normandy, Brittany, the Chateau country, Riviera hilltops, ancient Provence, Avignon with its memories of the Popes, Beaune and its vineyards, toy towns of Alsace, and Paris. The text is entertaining, but better still are the exquisite drawings of street scenes, castles, country lanes, the market-place, the town-gate, inns and chapels and wharves and forgotten bits of old Paris.

The Origin and Meaning of Place Names in Canada. By G. H. Armstrong. Toronto: The Macmillan Company of Canada. 1930. \$3.

Mr. Armstrong's work fills a need which must have been felt by many Canadians. Some of the information he has brought together in this substantial volume was available in various books and pamphlets, for the most part out-of-print or otherwise inaccessible, but a great deal is the result of his own patient research. So far as the present reviewer has been able to check the book, it is remarkably complete and accurate.

Sand Movement, Beaches and Kindred Subjects. A Bibliography. Prepared by H. E. Haferkorn. Fort Humphreys: The Engineer School. 1929.

To engineers and students this bibliography will prove extremely useful. It is divided into General Works, Sand Movement, Beaches, Bars, Bays, Coast Changes, Currents, Erosion, Estuaries, Shorelines, Tides, Waves. Copies may be obtained from the Engineer School Library, Army War College, Washington, D.C., for 4 cents.

Catalogue of the Manoir Richelieu Collection of Canadiana. Compiled by Percy F. Godenrath: Montreal: Canada Steamship Lines. 1930.

This is a list, with notes, of the valuable collection of old prints, engravings, maps, oil paintings and water-colours now hanging on the walls of the Manoir Richelieu at Murray Bay; and the mere list is a revelation of the wealth of pictorial material that exists illustrating one aspect or another of the long and eventful history of Canada.

Looking Back. By Robert Munro (Lord Alness). Toronto: Thomas Nelson and Sons. 1930. \$3.

These fugitive writings of the eminent Scotchman who became Secretary for Scotland and is now Lord Justice-Clerk of his native land, contain among many other entertaining things a series of Travel Sketches. Lord Alness takes us to Madeira, to Brussels, to the Riviera, to Cannes, Bournemouth, a corner of Cornwall, Dornoch, Nairn and Braemar, and always he has something to say that is worth while, something equally acceptable to those who know and those who do not know the places and people he describes.

Reading and Thinking. Edited by Richard Wilson. Adapted for use in Canadian schools by E. C. Woodley. Toronto: Thomas Nelson and Sons. 1930.

This is a series of six books, arranged for use in Grades II, III, IV, V, VI and VII of the public schools in Canada. Mr. Woodley's part has been to substitute for selections that were remote or inappropriate others taken from the works of Canadian authors. One notes selections from Lampman, Kirby, Ralph Connor, Bliss Carman, Marjorie Pickthall, Arthur Heming, Canon Scott, Ernest Thompson Seton, Charles G. D. Roberts, Susanna Moodie, and several other Canadian writers past and present. Also Tom Moore's "Canadian Boat Song" and that exquisite lyric of homesickness "The Lone Shieling". The books are well illustrated, including a number of reproductions in colour of famous paintings.

Journal of Abijah Willard, 1755. Edited by Dr. J. Clarence Webster. Reprinted from Collections of New Brunswick Historical Society, No. 13. St. John, N.B. 1930.

Captain Willard was an officer under Monckton in the expedition of 1755 which resulted in the capture of Fort Beausejour, and his journal, with Dr. Webster's invaluable notes, throws an interesting light on the campaign.

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